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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/088,687

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Brian R. Odgers

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EXAMINER

BOYCE, ANDRE D

ART UNIT

PAPER NUMBER

3623

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/088,687	<b>Applicant(s)</b> ODGERS ET AL.	
	<b>Examiner</b> Andre Boyce	<b>Art Unit</b> 3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/6/07</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. This Final office action is in response to Applicant's amendment filed October 17, 2007. Claims 1-4, 7, 9, 11, 15, 19 and 20 have been amended. Claim 23 has been added. Claims 1-23 are pending.
2. Applicant's arguments filed October 17, 2007 have been fully considered but they are not persuasive.

### ***Claim Rejections - 35 USC § 102***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-17 and 19-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Du et al (US 5,826,239).

As per claims 1, 11, 15 and 19, Du teaches storing constraint definition data defining constraints relating to availability of said resources for allocation to respective tasks; (column 9, lines 43-45 where HP OpenPM evaluates the rules and performs the rule actions when the rule conditions are met, whereby the rule conditions constitute the constraints of the resource allocation system.); storing an initial data representation of resource availability (column 4, lines 27-28 where the system checks a central site for availability of resource groups, whereby the central site constitutes a storage of initial data); receiving at data processing means, from at

least one of said resource interfaces, availability data concerning availability of a resource (i.e., each local resource manager (LRM) has all status information of and full control over resources at its site, column 3, lines 4-5); generating a proposed data representation of resource availability, based on the initial data representation together with said availability data (column 13, lines 6-8, where resource status or availability is provided); determining whether said proposed data representation is compatible with said constraint definition data (column 4, lines 57-67 and column 5, line 1, where the system determines the resource availability with respect to the specified activity and forwards the information to the second computer to assign the resource to the activity); in the case the data is compatible with the constraint definition data, substituting the proposed data representation for the initial data representation to generate a new initial data representation (column 4, lines 57-67 and column 5, lines 1-5, wherein the local resource manager assigns the available resources and updates the stored status data); and in the case the data is not compatible with the constraint definition data, transmitting a rejection signal to at least one other of said resource interfaces (i.e., unpredictable status change, wherein a resource may become not available, wherein the status change, i.e., rejection, is transmitted to the local resource manager (LRM), which is the interface for all the resources associated with the LRM, column 16, lines 56-66), said at least one other resource interface responding to receipt of said rejection signal by outputting availability data to said data processing means (i.e., LRM selects one of

the resources in the resource group to perform the specified activity, based upon status data, columns 4-5, lines 65-67 and 1-5).

As per claims 2 and 12, Du teaches receiving from one resource interface further availability data concerning availability of a resource, generating a further proposed data representation of resource availability, based on the initial data representation together with said further availability data (column 4, lines 57-67 and column 5, lines 1-5, where the LRM system assigns the available resources and updates the data in the second computer accordingly. The updated information would function as further availability data since the computer updates the resources and activities with respect to availability information as the information changes.).

As per claims 3 and 13, recites the same limitations as claim 1 and is therefore subject to the same art rejection. Du teaches multiple resource interfaces in Figure 1 where there are multiple users and machines.

As per claim 4, Du teaches at least one resource interface is provided with at least one resource profile, the resource profile comprising data in respect of a resource (i.e., local resource manager (LRM) including resource database 150, column 13, lines 41-47), the method further comprising the steps of: receiving at a resource interface a rejection signal (i.e., unavailable resource state, column 15, lines 55-60); reviewing a resource profile provided with respect to that resource interface; and outputting availability data to the data processing means dependent on the outcome of the review (i.e., LRM tracks dynamic status information including availability and work load, column 13, lines 43-47).

As per claim 5, Du teaches at least first and second data types in respect of a resource, the first data type comprising at least one resource attribute (i.e., resource name and capability, column 15, line 1) and the second data type comprising availability commitments of the resource (i.e., resource status, column 15, line 1).

As per claim 6, Du teaches a priority indicator for at least one availability commitment of the resource, and wherein said step of reviewing a resource profile comprises reviewing the priority indicator (i.e., two aspects of resource status including state and load, column 15, lines 50-54).

As per claim 7, Du teaches said rejection signal comprises an identifier for a selected resource, or for a selected set of resources (i.e., state of the resources including not available, column 15, lines 50-59), and wherein said steps of reviewing a resource profile and outputting availability data to the data processing means dependent on the outcome of the review comprise reviewing the resource profile for the presence of said identifier and outputting availability data only if said identifier is present (e.g., state(R) and load (R) to denote the current state and load of R, column 15, lines 50-54).

As per claim 8, Du teaches subsequent to generating and transmitting said rejection signal, triggering termination of tasks being carried out in respect of a common work requirement to which the rejection signal is related (i.e., trigger implementation, column 18, lines 51-57).

As per claim 9, Du teaches said step of triggering termination is carried out after a predetermined time has elapsed during which no availability data has been received from a resource interface (i.e., temporal status specification, column 16, lines 37-40).

As per claim 10, Du teaches said constraint definition data comprises at least two sets of constraint definition data (i.e., state and load data, column 15, lines 50-54), and the method further comprises: receiving via a user interface a proposed modification to a first set of constraint definition data (i.e., predictable change status, column 16, lines 30-32); reviewing the proposed modification against the second set of constraint definition data; in the case that the proposed modification is compatible with the second set, modifying the first set accordingly; and in the case that the proposed modification is not compatible with the second set, transmitting a rejection signal to the user interface (i.e., determination of whether the change status state is available or not available, column 16, lines 33-37).

As per claim 14, Du teaches a resource profile comprises at least one data element and a rejection message comprises at least one data element (i.e., attributes of the resource, column 15, line 1), review of a resource profile comprising matching the data element from a rejection message against the data element or elements in a resource profile (i.e., match against status and capability of the resource).

As per claim 16, Du teaches the signal input is also for receiving a management signal input from at least one management interface, one or more of said

management signals comprising constraint data with respect to at least one resource, and the apparatus further comprises means for using constraint data received from a management interface to enter or change data in the constraint definition data store (column 19, lines 60-67 where OpenPM contains a rule node which contains a list of condition-action rules or constraints and as indicated in Figure 4 there is a database manager (64) that interacts with the OpenPM database which contains the constraint definition data. In addition, column 9, lines 30-34 teach that the system can interact with external environments.), and means to categorize data in the constraint definition data store according to source type (column 17, lines 40-43 where each resource group has an ID associated with it that acts as a means of sorting or categorizing the constraint information), the apparatus being further arranged, on review of the content of the constraint definition data store, to resolve any conflict in constraint data relevant to a task acceptance signal according to its source type (column 10, lines 48-56 where the resource managers (28) are used to resolve any conflicts between the constraints and the resources so that the resources can be assigned.).

As per claim 17, Du teaches the constraint definition data store is categorized by location in the store. (As noted in Figure 1, the system contains databases. It is well known that databases store information in files where each file would have a unique "address" or location in the database.)



As per claims 20 and 21, Du teaches said constraint definition data define constraints, relating to the allocation of tasks to respective resources (LRM with control over resources, column 13, lines 41-43).

As per claim 22, Du teaches a task acceptance signal from a resource interface and wherein the apparatus is arranged in use to respond to receipt of a task acceptance signal by reviewing the content of the constraint definition data store and, depending on the result of the review to output to at least one resource interface a notification signal identifying at least one task for which resource is required, or to allocate resource to a task (i.e., task status state and load, including task availability, wherein the task being available would include task acceptance, column 15, lines 50-59).

As per claim 23, Du teaches a priority indicator for at least one availability commitment of the resource, and wherein said step of reviewing a resource profile comprises reviewing the priority indicator (i.e., availability commitment based upon dynamic status information, including availability and current work load, column 13, lines 41-47).

***Claim Rejections - 35 USC § 103***

5. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Du et al (US 5,826,239).

As per claim 18, Du teaches the source of data in the third category being requirements of an operational support system for use in performing allocated

task(s) (column 11, lines 37-50 where the service management layer (102) functions as a support system for performing the tasks) and the apparatus is further adapted to store at least a third category of data in the constraint definition data store (column 9, lines 41-44 where the system evaluates the rules or constraints and performs the rule actions when the rule conditions are met. Whereby "rules" indicates more than one rule.) Official notice is taken that it is old and well known that "rules" may indicate three or more. Therefore it would have been obvious to one of ordinary skill in the art to modify the system of Du with three (or more) rules to provide means for allowing more constraints, and consequently more accurate resource allocation results.

### ***Response to Arguments***

6. In the Remarks, Applicant argues, with respect to claims 1 and 15, that Du et al does not teach or suggest sending a rejection signal to resources other than the resource which triggered the update. The Examiner respectfully disagrees. First, the Examiner notes that the claim language recites "transmitting a rejection signal to at least one other of said resource interfaces..." As such, the Examiner submits that the local resource manager (LRM) is indeed the resource interface for all the resources it manages (i.e., each LRM has all status information of and full control over resources at its site, column 3, lines 4-5). In addition, Du et al disclose unpredictable status change, wherein a resource may become not available, wherein the status change (i.e., rejection) is transmitted to the LRM (column 16,

lines 56-66). As a result, since the LRM is indeed the resources interface, Du et al indeed discloses transmitting a rejection signal to at least one other of said resource interfaces.

In addition, Applicant argues that Du et al does not teach or suggest said at least one other resource interface responding to receipt of said rejection signal by outputting availability data to said data processing means. The Examiner respectfully disagrees. First, Du et al discloses the LRM selecting one of the resources in the resource group to perform the specified activity, based upon status data (columns 4-5, lines 65-67 and 1-5). Moreover, the LRM (i.e., resource interface) will determine availability of resources based upon an unpredictable status change (i.e., rejection, column 16, lines 56-66). As a result, Du et al indeed discloses said at least one other resource interface (i.e., LRM) responding to receipt of said rejection signal (i.e., unpredictable status change) by outputting availability data to said data processing means (i.e., availability of resources determined by LRM).

Applicant also argues that the Examiner does not consider "the data processing means" limitation, but his argument appears to rely on the data processing means being one thing in relation to claim 1 and another in relation to dependent claim 4. The Examiner respectfully disagrees. As seen in both claims 1 and 4, the local resource manager (LRM) in Du et al functions as both the data processing means and resource interface.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre Boyce whose telephone number is (571) 272-6726. The examiner can normally be reached on 9:30-6pm M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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adb  
December 30, 2007

  
ANDRE BOYCE  
PATENT EXAMINER  
AU 3623